

Abstract of the Disclosure

An NMR imaging process utilizes both driven equilibrium and fast-spin echo techniques to acquire image data. The fast-spin echo technique is a multi-echo imaging sequence, where a 90-degree RF pulse applied at the center of any echo turns the magnetization back in the direction of the static magnetic field. Within a short waiting time after that pulse, the spins are ready to be excited again. The sequence follows a first 90-degree RF pulse by a series of  $n$  180-degree RF pulses, followed by  $n$  echoes. A second 90-degree RF pulse applied to the  $n$ th echo returns the magnetization. A multiple single-slice mode is utilized to acquire individual slice images one at a time. A continuous single-slice mode is utilized to acquire individual slice images automatically in sequence over the region of interest. In either mode, adjacent slices can be made to overlap to a degree ranging from 0% to 100%.

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